

Work Order ID 121355

June-25-14 12:54:44 PM

121355

Page 1

Item ID: 647.9710

Revision ID:

Item Name: Lower Body

Start Date: 6/25/14 Start Qty: 20.00

Required Date: 7/04/14 Req'd Qty: 20.00

Reference:

Accept

N900040100

Setup Start ***NS1***

Stop ***NS2***

Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start ***NR1***

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
647.9700	A1

100

100

Bandsaw

Jeaspa Bandsaw

BAND SAW

Memo

Cut Blank at 7.250"

0.00

0.00

DAS
20
9-89

14-06-30

110

110

HAAS 1

HAAS CNC vertical machine #1

HAAS CNC VERTICAL MACHINING #1

Memo

1-Machine per folio FB182

DWG REV: A

FOLIO REV: AA

2- deburr and break all sharp edges

0.00

0.00

DAS
20
9-89

14-06-30

DAS
14
9-89

14/07/02

Work Order ID 121355

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121355

Page 3

Item ID: 647.9710 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Lower Body
 Start Date: 6/25/14 Start Qty: 20.00 ***20*** Cust Item ID:
 Required Date: 7/04/14 Req'd Qty: 20.00 ***20*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	Receive & Inspect for Damage & Mat'l Certs	0.00							
150									
Packaging	Memo	0.00							
Packaging									
155	QC5- Inspect part completeness to step on W/O	0.00							
155									
QC	Memo	0.00							
Quality Control									
180	Identify as per dwg & Stock Location: _____	0.00							
180									
Packaging	Memo <i>MF</i>	0.00							
Packaging									

IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV

14/1/23 (20)

20

14/1/24 20 **DAS 32 9-89**

Work Order ID 121355

June-25-14 12:54:44 PM

121355

Page 4

Item ID: 647.9710 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Lower Body
Start Date: 6/25/14 Start Qty: 20.00 ***20*** Cust Item ID:
Required Date: 7/04/14 Req'd Qty: 20.00 ***20*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	QC21- Final Inspection - Work Order Release	0.00							
190									
QC	Memo	0.00							
Quality Control									

MLJ 14-07-24

14-7-24

Picklist Print

June-25-14 12:54:43 PM

Page 1

Work Order ID: 121355

121355

Parent Item: 647.9710

647 9710

Parent Item Name: Lower Body

Start Date: 6/25/14

Required Date: 7/04/14

Start Qty: 20.00

Required Qty: 20.00

Comments: IPP REV:A NEW ISSUE JFS 13/04/10 VERIFY BY: JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M7075T6B5.000X1.000		Purchased	No			100	f	199.2800	0.605	13			
										**	12.666'	DAS 20 9-30	14-06-30
M7075T6B5 000X1 000													
7075-T6 BAR 5.000" X 1.000"													

Location

Loc Qty

Loc Code

MAT008

199.28

125554

2

M125997

1

M126981

36

M127481

160.28

12.666'

APICAL

INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO.

03933

SHEET 1 OF 1

DWG NO. 647.9700

REV: A

PREPARED BY B. PETERS

DATE: 06/14/13

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: CUTTER SUB ASSYS

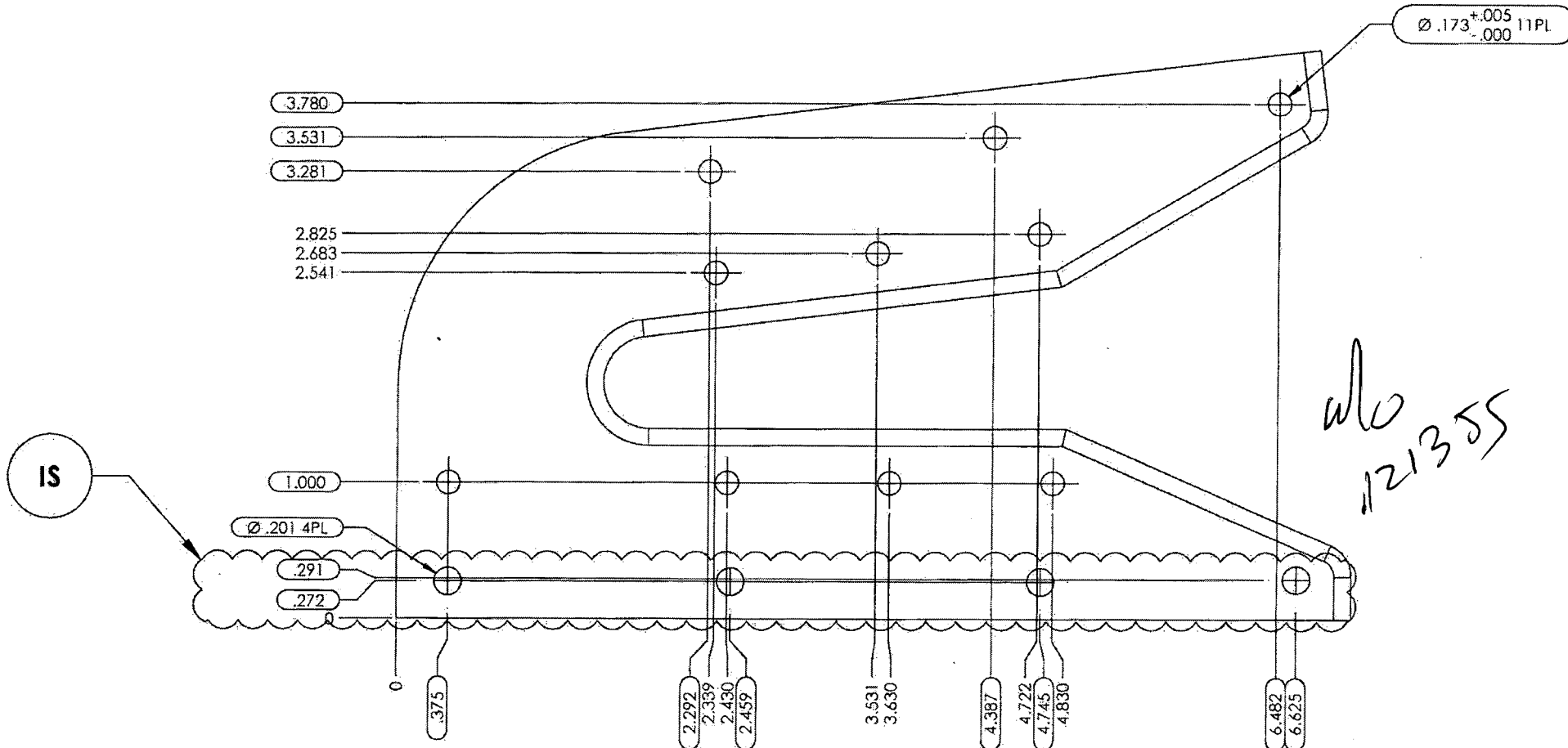
APPROVED BY: ENGR *[Signature]*

MFG *[Signature]* QC *[Signature]*

EFF. CURRENT ORDER

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: CORRECTED DIMENSIONAL ERROR.



SHEET 7, ZONE C1 IS:

DOCUMENTS EFFECTED:

☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☐ BOM

CHANGE CATEGORY

☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED

☐ YES ☒ NO

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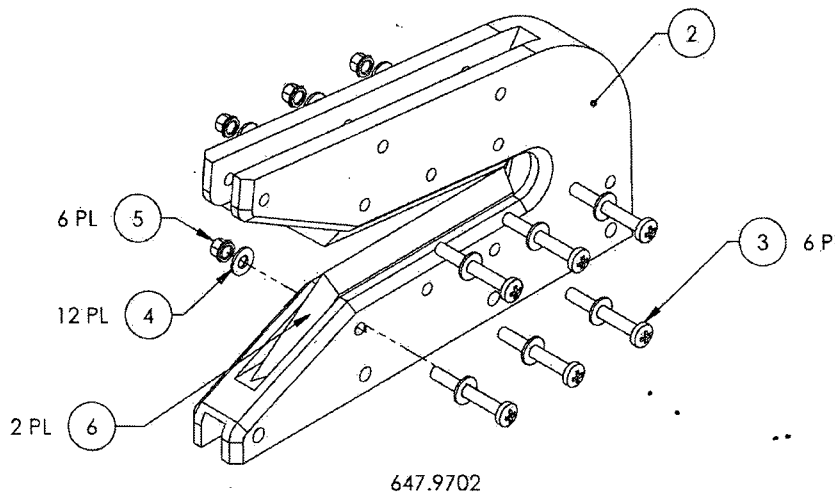
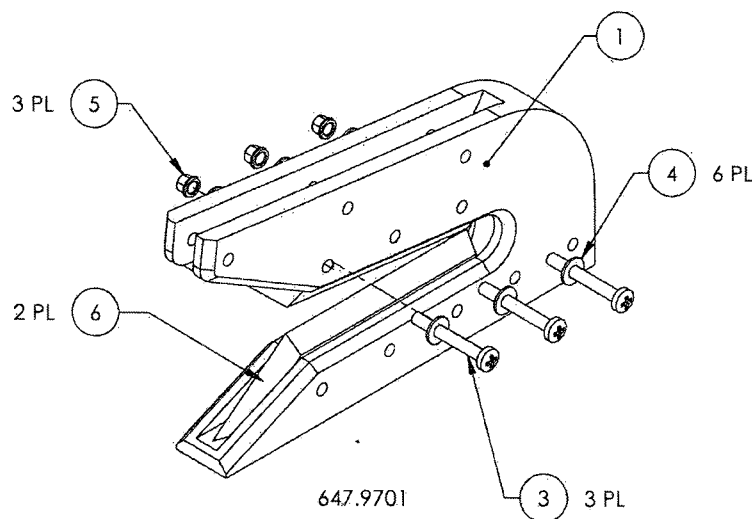
NOTES:

1. MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12.
2. FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK; PRETREAT PRC-DESOTO PR-148 ADHESION PROMOTER; PRIME IAW MIL-P-23377J TYPE I CLASS N; 1-2 MIL MAX.
4. DEBURR AND BREAK ALL SHARP EDGES EXCEPT WHERE OTHERWISE NOTED.
5. IDENTIFY IAW MPP-120.
6. APPLY F/N 7 AS REQUIRED TO ALL FAYING SURFACES OF F/N 6 UPON ASSEMBLY.
7. CUTTING EDGE INTENDED TO BE SHARP, DO NOT BREAK SHARP EDGE.
8. DIMENSION SHOWN IS FOR INSPECTION AFTER FINISH.

UNINCORPORATED ECN(S)

03933

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
1	LAST PRODUCTION RELEASE: PRT		
2	INITIAL RELEASE	04-26-10	P. BRAVO
3	INCORPORATED ECN(S) 03933 & 03809	04-11-13	P. BRAVO



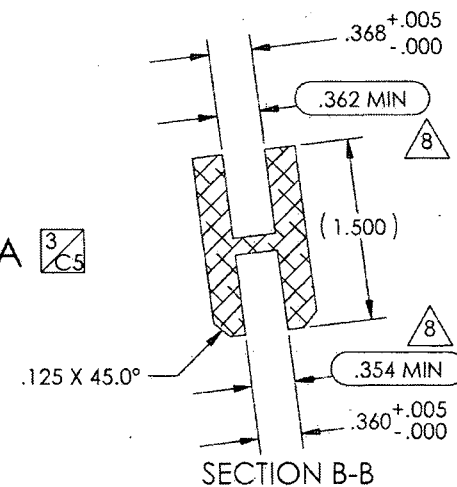
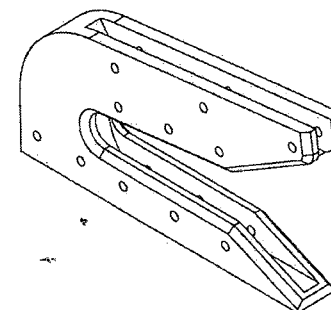
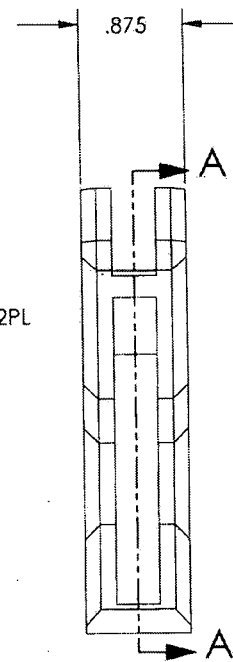
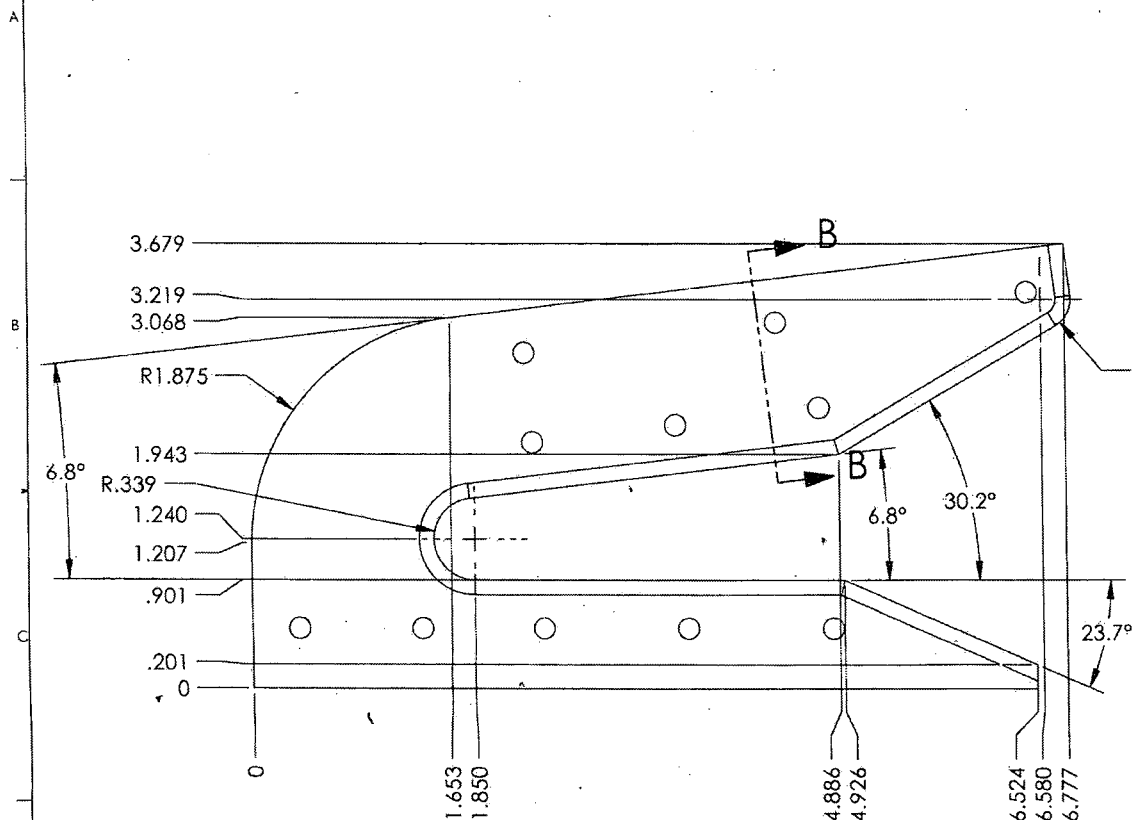
647.9702

A/R	A/R	7	601.2764	RTV	LOCITE 598	
2	2	6	646.9711	BLADE		
6	3	5	601.1541	LOCKNUT	MS21042L08	
12	6	4	601.2764	WASHER	NAS1149FN832P	
6	3	3	601.2765	SCREW	MS27039-0819	
1		2	647.9711	UPPER BODY		
	1	1	647.9710	LOWER BODY		
			647.9702	UPPER CUTTER ASSY		
			647.9701	LOWER CUTTER ASSY		
.9702	.9701	FIND #	PART #	DESCRIPTION	MATL	SPEC.

PARTS LIST			
QTY	ORIGINAL DATE	DATE	
NEXT ASSY (S)	DESIGNED BY	DATE	
647.9700	APPROVED BY	DATE	
	CONTRACTOR		
	UNLESS OTHERWISE SPECIFIED		
	DIMENSIONS ARE IN INCHES		
	TOLERANCES ARE		
	2 PLACE DECIMALS ± .03		
	3 PLACE DECIMALS ± .010		
	ANGLES ± .5°		
DATE	PAGE CODE	DWG NO	REV
07/12/16		647.9700	A
SCALE NONE		SHEET 1 OF 7	

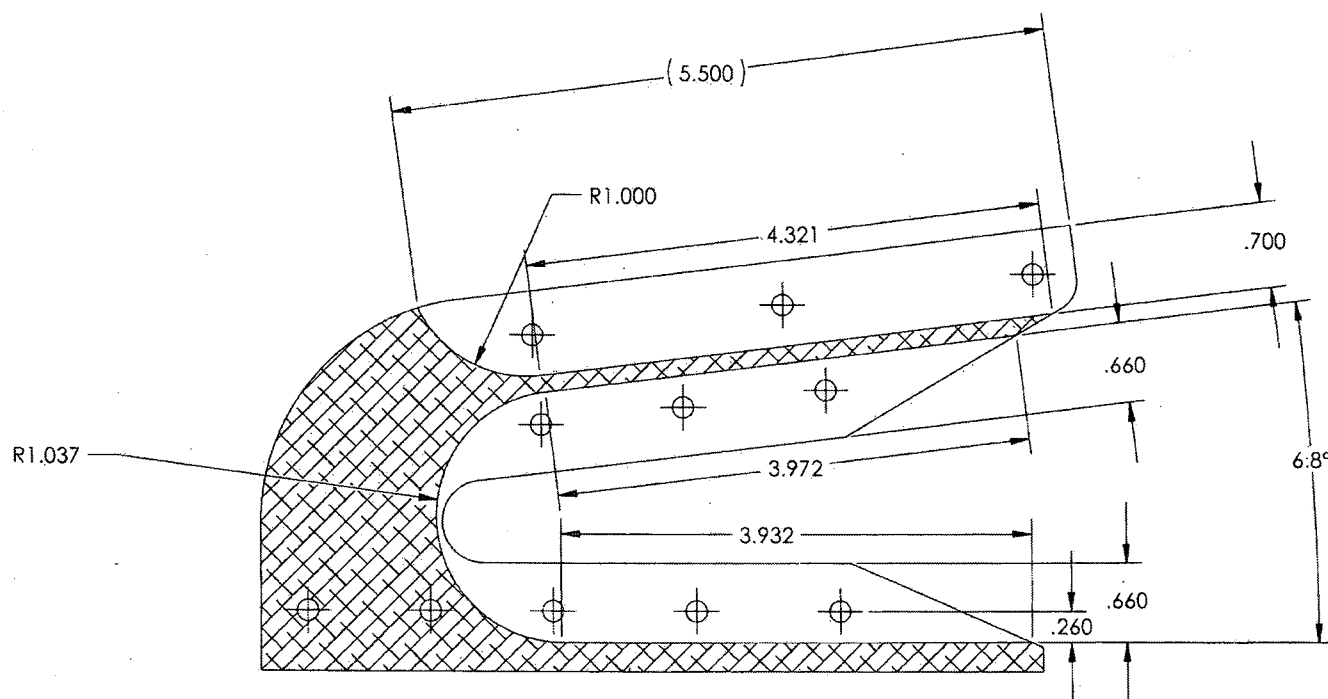
APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760) 724-5300
CUTTER SUB ASSYS

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ORIGINAL DATE REV. 1 04/26/00		APICAL INDUSTRIES	
DRAWN BY: A. DIAZ		2608 TEMPLE HEIGHTS DR.	
CHECKED BY: P. BRAVO		OCEANSIDE, CA. 92056-3512 (760) 724-5300	
DESIGNED BY: P. BRAVO		CUTTER SUB ASSYS	
CONTRACT NO:		647.9700	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ±.01 ANGLES ±.1°		SHEET 2 OF 7	REV. A

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SECTION A-A

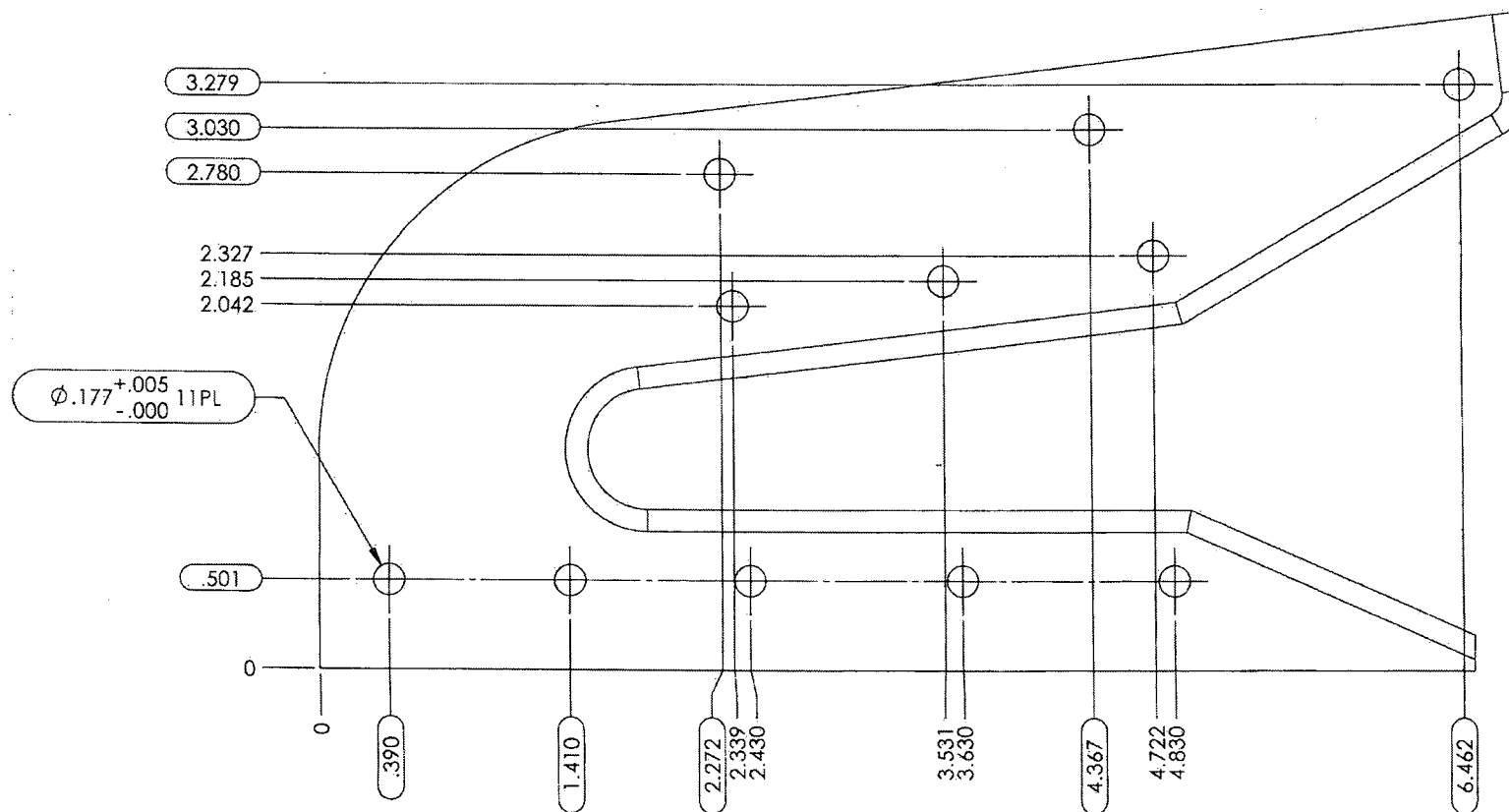
2/B6

ORIGINAL DATE DATE (MM-YY) 04-26-10		APICAL INDUSTRIES	
DRAWN BY: J. QUINN		2608 TEMPLE HEIGHTS DR.	
CHECKED BY: P. BRAVO		OCEANSIDE, CA. 92056-3512 (760) 724-5300	
DRAWING APPROVAL BY: [Signature]		CUTTER SUB ASSYS	
CONTRACTING			
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ± .02 3 PLACE DECIMALS ± .005 ANGLES ± .5°		SHEET 8	REV. A
		CAGE CODE 07M26	DWG. NO. 647.9700
		SCALE NONE	SHEET 3 OF 7

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A
B
C
D

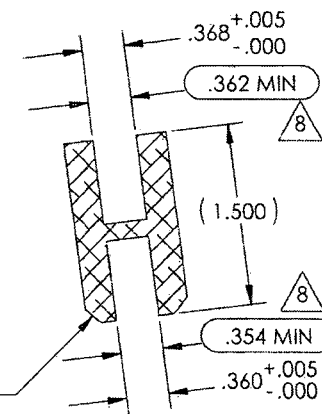
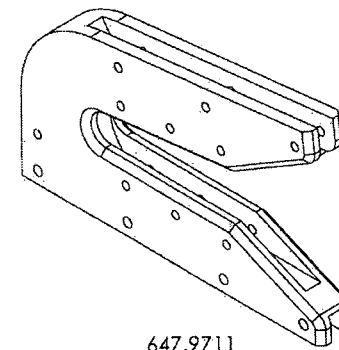
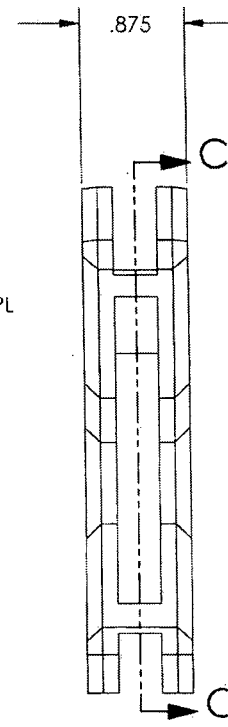
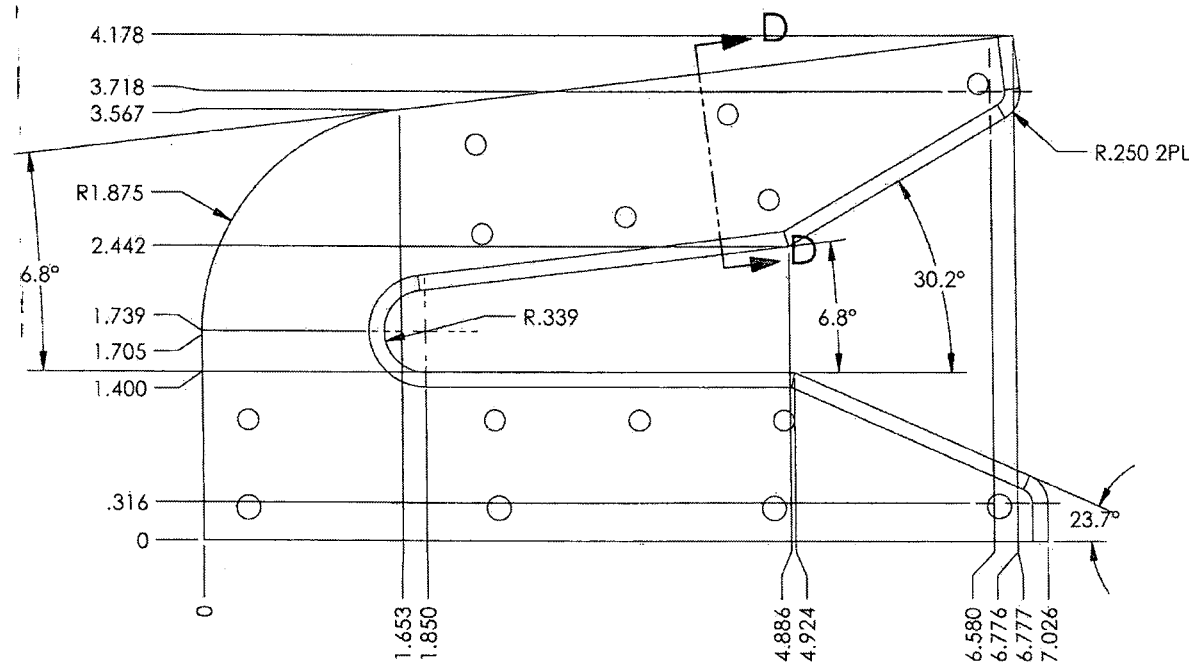
1 2 3 4 5 6 7 8



HOLE LOCATIONS +/- .002

ORIGINAL DATE		DATE	
DRAWN BY		CHECKED BY	
A. OLAN		P. BRADY	
DRAWING APPROVAL		DATE	
P. BRADY		DATE	
CONTRACT NO.		SHEET	
UNLESS OTHERWISE SPECIFIED		SHEET	
DIMENSIONS ARE IN INCHES		SHEET	
TOLERANCES ARE:		SHEET	
2 PLACE DECIMALS ± .01		SHEET	
3 PLACE DECIMALS ± .001		SHEET	
ANGLES ± .5°		SHEET	
APICAL INDUSTRIES		SHEET	
2608 TEMPLE HEIGHTS DR.		SHEET	
OCEANSIDE, CA. 92056-3512 (760) 724-5300		SHEET	
CUTTER SUB ASSY		SHEET	
SCALE: NONE		SHEET	
CAGE CODE		SHEET	
B 07M26		SHEET	
DWG. NO.		SHEET	
647.9700		SHEET	
REV.		SHEET	
A		SHEET	
SHEET		SHEET	
4 OF 7		SHEET	

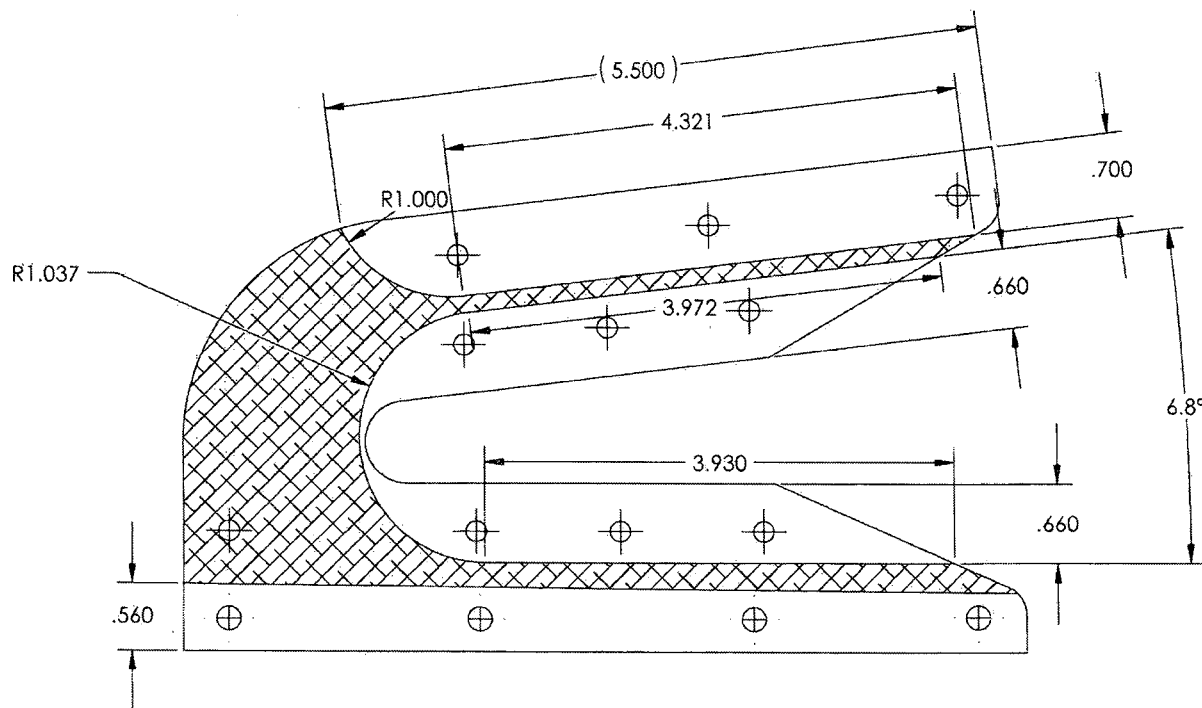
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SECTION D-D

ORIGINAL DATE 12/24/10		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWN BY A. CLAYTON	CHECKED P. BRAYO	CUTTER SUB ASSYS.	
DESIGNED BY P. BRAYO	APPROVED BY P. BRAYO	SIZE 8	DWG. NO. 647.9700
COMPACTING (UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMAL: .01 3 PLACE DECIMAL: .001 ANGLES: .5°	SCALE NONE	SHEET 5 OF 7	REV. A

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SECTION C-C 5
B6

ORIGINAL DATE JAN 24 1981		APICAL INDUSTRIES 2408 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300	
DRAWN BY A. QUINN	CHECKED BY P. BRAY		
DRAWING APPROVAL P. BRAY			
CONTRACT NO.		CUTTER SUB ASSYS	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2-PLACE DECIMALS ±.03 3-PLACE DECIMALS ±.010 ANGLES ±.01°			
SIZE B	CAGE CODE 071A26		
SCALE: NONE		SHEET 6 OF 7	

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$\phi .173^{+.005}_{-.000}$ 11PL

3.780

3.531

3.281

2.825

2.683

2.541

1.000

$\phi .201$ 4PL

.272

0

0

.375

2.292

2.339

2.430

2.459

3.531

3.630

4.387

4.722

4.745

4.830

6.482

6.625

HOLE LOCATIONS +/- .002

ORIGINAL DATE 10/04/01	APICAL INDUSTRIES
DESIGNED BY A. QUINN	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300
CHECKED BY P. BRADY	CUTTER SUB ASSYS
DRAWING APPROVAL P. BRADY	
DATE 10/04/01	
CONTRACT NO.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	SHEET CODE B
TOLERANCES ARE 2 PLACE DECIMALS ± .03	DWG. NO. 647.9700
3 PLACE DECIMALS ± .010	REV. A
ANGLES ± .5°	SCALE NONE
	SHEET 7 OF 7

DART AEROSPACE LTD		Work Order: 121355
Description: Lower Body		Part Number: 647.9710
Inspection Dwg: 647.9710 Rev: A		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
.201	±.010	.201	—		Vern	ML-06
.901	±.010	.901	—		"	
3.679	±.010	3.679	—		"	
6.524	±.010	6.522	—		H-G	3A.066
6.8°	±1/2°	6.8°	—		C-Square	
23.7°	±1/2°	23.7°	—		"	
.875	±.010	.880	—		Vern	ML-06
.368	±.005 ±.000	.368	—		"	
1.500	±.010	1.500	—		"	
.360	±.005 ±.000	.360	—		"	
.125X45°	±.010X ±1/2°	.125X45°	—		"	
5.500	±.010	5.500	—		"	
.700	±.010	.700	—		"	
.660	±.010	.660	—		"	
.660	±.010	.660	—		"	
Ø.177	±.005 ±.000	Ø.177	—		"	
.501	±.005	.501	—		"	
2.780	±.005	2.780	—		"	
3.030	±.005	3.030	—		"	
.390	±.005	.390	—		"	
1.410	±.005	1.410	—		"	
3.630	±.005	3.630	—		"	
4.830	±.005	4.830	—		"	

Measured by: AX	Audited by: H	Preliminary Approval:
Date: 14/07/01	Date: 14-7-02	Date:

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

10.04.15

11/05/01
X
1

4.830

3.930

1.410

0.900

0.530

3.930

1.020

2.100

0.900

0.900

0.900

0.900

2.100

1.200

0.900

0.900

0.900

0.900

0.900

0.900

0.900

0.900

0.900

0.900

4.830

3.930

1.410

0.900

0.530

3.930

1.020

2.100

0.900

0.900

0.900

0.900

2.100

1.200

0.900

0.900

0.900

0.900

0.900

0.900

0.900

0.900

0.900

0.900

1.100

1.100

1.100

1.100

1.100

1.100

1.100

1.100

1.100

1.100

1.100

1.100

1.100

1.100



A.T.G. Industries Inc.
731, rue Industrielle Rd.
PLATING DEPARTMENT
Rockland, On K4K 1T2
Canada
Ph: (613) 446-4544
Fax: (613) 446-4556

Pack List

Number: 63165

Date: 23-Jul-14

To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ship To


DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms		Ship Via	
Quantity	Description		
1 lot	Part: ASST 12 PCS 646.3711 (6.10) 10 PCS 646.3011 (10.25) 20 PCS 647.9710 (14.50) 6 PCS 646.3310 (18.10) 10 PCS 646.3810 (6.55) 10PCS 646.3812 (6.10) 6 PCS 646.3312 (12.05) HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2 PRIME MIL-P-23377J TYPE I CLASS N 4 PCS D4703-043 (0.90) BLACK ANODIZE MIL-A-8625 TYPE II CLASS 2 PRICE IS PER PIECE Job: 20140429	Rev:	Line:
Certificate of Conformance			
A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order.			
ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY			
DATE : 23/7/14			
CERTIFIED SIGNATURE : 			
RECEIVER SIGNATURE : _____			